3Com® Switch 4210 Family

DATA SHEET

Highly affordable, entry-level managed connectivity for medium-sized businesses and branch office networks

OVERVIEW

The 3Com® Switch 4210 is a family of Layer 2 entry-level 10/100 LAN switches with enterprise-class QoS, security and management features, delivering high value for network administrators looking for an economical edge device. Available Power over Ethernet (PoE) models are ideal for voice over IP and wireless networking installations; non-PoE models are also available for simple port expansion.

Setting them apart from lower-end "smart managed" devices, the Switch 4210 supports an industry-standard Command Line Interface, Web-based administration, and SNMP management. Switches can be clustered in any combination up to thirty-two units for simplified administration.

In addition to rack-mount 26-port models, the Switch 4210 is available in small form factor units with nine or 18 ports for enterprise branch and small workgroup deployments, in both PoE and non-PoE variants, with the same manageability as the larger rack-mount versions.

The Switch 4210 comes with 3Com's lifetime warranty covering the unit, power supply and fan; Advanced Hardware Replacement with next business day shipment is available in most regions.

KEY BENEFITS

ECONOMICAL, FLEXIBLE LAYER 2 NETWORKING

3Com Switch 4210 switches deliver enterprise-class 10/100 Layer 2 edge connections with Gigabit uplinks. All models are wirespeed and non-blocking for optimum performance. These switches feature combination ports that can run in one of two modes: 10/100/1000 Mbps connections over copper Ethernet cabling, or 100 or 1000 Mbps over fiber cabling using SFP mini-GBIC technology.

POWER OVER ETHERNET FOR VOICE-READY NETWORKING

Industry-standard IEEE 802.3af Power over Ethernet is supported on three switches: the 9-, 18- and 26-port PWR models. These switches are ideal for workgroups where phones or wireless access points connect together with user end stations, reducing costs and simplifying the installation of converged voice and wireless networks by providing power over the same Ethernet cabling as used for data.

left, from top: 3Com Switch 4210 9-Port, Switch 4210 18-Port, Switch 4210 26-Port
right, from top: Switch 4210 PWR 9-Port, Switch 4210 PWR 18-Port, Switch 4210 PWR 26-Port

KEY BENEFITS
(CONTINUED)

PLUG AND PLAY CONVENIENCE

The Switch 4210 automatically selects the optimal speed and duplex mode of cables connected to it, preventing mis-configuration of the network. The switches also detect and adjust to cross-over or straight-through cable connections through its auto-MDI/MDIX feature, which eliminates the need for specific cables.

Link Aggregation Control Protocol (IEEE 802.3ad) further simplifies network configuration, automatically sensing the presence of duplicate links and aggregating them into trunks, thereby maximizing network traffic flow capability.

SECURE NETWORKING

The Switch 4210 helps ensure secure network access using standard IEEE 802.1X network login with RADIUS Authenticated Device Access (RADA), a 3Com innovation. RADIUS support enables user authentication, while the switch is also able to authenticate attached devices (IP phones, for example) via their MAC address for additional endpoint security.

A "Guest" VLAN feature allows temporary users on the network to access the internet, for example, while restricting broader access to sensitive internal resources.

Additional security measures—Secure Shell version 2 (SSH v2) and SNMP v3 with authentication and encryption of network management traffic—are enforced when accessing switch management utilities.

ENTERPRISE-LEVEL NETWORK CONTROL AND MANAGEMENT

The Switch 4210 family is easy to use and manage, designed to increase business productivity by reliably supporting business applications.

Features usually found only in higher-end enterprise switches are included: a robust industry-standard command line interface is available, along with an embedded web-based interface; the switch also functions with SNMP management tools like the 3Com Enterprise Management System, Network Director or Network Supervisor; and an internal file system is supported, with the ability to remotely backup and restore configuration files.

Cluster together up to 32 devices for easy administration, with single IP management across 3Com switching lines—with mixed clusters of Switch 4210, 4200G, 4500G, 5500 and 5500G devices.

IPv6 management is also supported; there is no need to replace the switch when upgrading to the latest Internet Protocol standard.

PROVEN OPERATING SYSTEM

The 3Com Operating System employed in the Switch 4210 is the same powerful software used in the 3Com Switch 8800 and Switch 7700 modular switches, the Switch 5500 and 4500 stackables, and 3Com enterprise routers. This consolidates administration over the entire switching infrastructure and provides edge-to-core visibility and control when using 3Com management applications such as 3Com Enterprise Management Suite and 3Com Network Director.

WARRANTY AND SERVICES

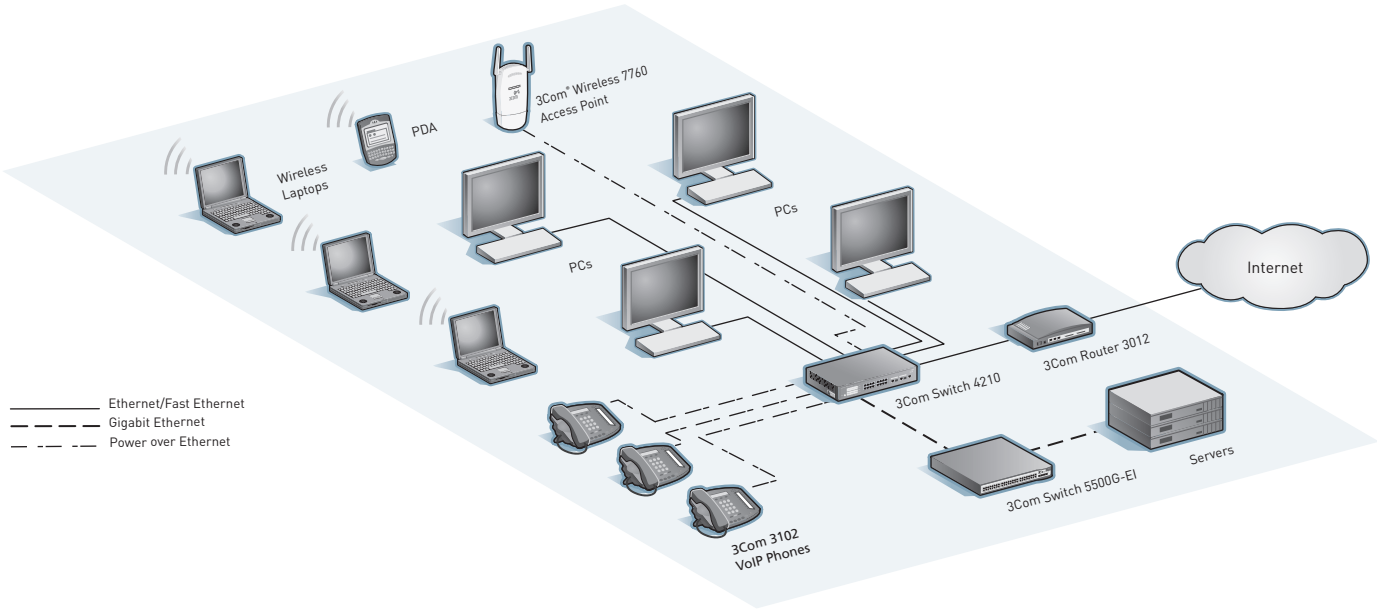
3Com gives a Limited Lifetime Hardware Warranty on the Switch 4210 Family, including the power supply and fan.

Advance Hardware Replacement, with Next Business Day shipment in most regions, and Limited Lifetime software updates, is provided. See www.3com.com/warranty for details.

FEATURE HIGHLIGHTS

Feature	Description
IEEE 802.1X network access control	Standards-based security combined with RADIUS authentication.
RADIUS Authenticated Device Access (RADA)	Authentication of attached devices via MAC address for an additional level of endpoint security.
Bandwidth rate limiting and four priority queues	Enforce controls on each port for efficient use of network resources and prioritization of delay-sensitive traffic.
"Dual-personality" Gigabit Ethernet interfaces	Choice of copper or fiber media for flexible uplinks.
Multicast filtering with IGMP snooping versions 1, 2 and 3	Eliminate unneeded traffic on the network, improve network efficiency.
Spanning Tree, Rapid Spanning Tree, and Multiple Spanning Tree support	Improve network resiliency and availability.
Power over Ethernet models	Prepare the network for Voice over IP or wireless access points.
100 MB and 1000 MB fiber connections	Use SFPs to add fiber connections to the network. Dual-speed support makes network migration easier.
Secure management	Authentication and encryption of management traffic via Secure Shell (SSH) version 2 and SNMP version 3.
Fanless operation, small footprint	Non-PoE units run silently and occupy minimal space.
3Com Operating System	Proven software featured in 3Com premium enterprise switches such as the Switch 4500, 5500, 7700 and 8800 families and enterprise routers like the Router 6000, 5000 and 3000 families.
Service and Support	Backed by 3Com Global Services and authorized partners with demonstrated expertise in network assessment, implementation and maintenance.

SMALL-TO-MEDIUM LAN CONFIGURATION SUPPORTED BY THE SWITCH 4210



In the above network, 3Com Switch 4210 and Switch 5500G-EI units are managed as a single cluster.

PRODUCT WARRANTY AND OTHER SERVICES

Warranty	3Com Limited Lifetime Warranty. For as long as the original end user owns the product, or for five years after 3Com discontinues sale of the product, whichever occurs first.
Hardware coverage	Covers the complete unit including power supply and fan.
In-warranty hardware replacement*	Advanced Hardware Replacement of hardware for the duration of the warranty. In the US 48 contiguous states this is same-day ship with next business day delivery when call received before noon Pacific time. For Canada, Alaska and Hawaii, this is same-day ship when call received before noon Pacific time. For the rest of the world, it is next-business-day ship. Actual delivery times may vary depending on customer location. Reasonable commercial efforts apply.
Software coverage	90 days for media replacement.
Software updates*	Access to releases with incremental software features and bug fixes. For the Switch 4210, updates are all releases within the licensed 3Com OS software level.
Online Knowledgebase support*	Access to online troubleshooting tool for the duration of the warranty.

* These services are not included as part of the Warranty and 3Com reserves the right to modify or cancel this offering at any time, without advance notice. This offering is not available where prohibited by law. Services are effective at warranty start date, and are enabled with product registration. Customers receive a user ID with eSupport registration.

SERVICE AND SUPPORT

3Com Global Services offers the resources and talents of a major corporation plus more than two decades of experience in resolving network challenges and delivering business benefits to enterprises around the world.

Global support with a personalized focus in the local language helps drive productivity and minimize expenses. Because 3Com understands both the technology and the business, we're the partner you need to maintain your competitive edge and remain strong.

Suggested Service, Support and Training Offerings

Network Health Check	An activity-auditing service focused on improving network performance and productivity Includes traffic monitoring, utilization analysis, problem identification, and asset deployment recommendations Extensive report provides blueprint for action
Network Installation and Implementation Services	Experts set-up and configure equipment and integrate technologies to maximize functionality and minimize business disruption For large and complex sites, implementation services include personalized configuration, project management, extended testing and coaching on network administration
Project Management	Provides extra focus and resources that special projects demand 3Com engineers manage entire process from initial specifications to post-project review Using structured methodology, requirements are identified, projects planned and progress of implementation activities tracked
3Com Guardian℠ Maintenance Service	This service provides comprehensive on-site support and includes advance hardware replacement, telephone technical support and software upgrades
3Com Express℠ Maintenance Service	This service provides speedy access to 3Com shipment of advance hardware replacements, software upgrades and telephone support
3Com University	Self-paced and instructor-led technology and product courses, plus certification programs

SPECIFICATIONS

All information in this section is relevant to all members of the 3Com Switch 4210 family, unless otherwise stated.

CONNECTORS

9-port
8 10BASE-T/100BASE-TX ports and 1 dual-personality 10/100/1000 or SFP port

10/100 and 10/100/1000 ports are auto-negotiating, configured as auto-MDI/MDIX

RJ-45 console port

IEEE 802.3af in-line power on 4 10/100 ports (PWR model)

18-port
16 10BASE-T/100BASE-TX ports and 2 dual-personality 10/100/1000 or SFP ports

10/100 and 10/100/1000 ports are auto-negotiating, configured as auto-MDI/MDIX

RJ-45 console port

IEEE 802.3af in-line power on 8 10/100 ports (PWR model)

26-port
24 10BASE-T/100BASE-TX ports and 2 dual-personality 10/100/1000 or SFP ports

10/100 and 10/100/1000 ports are auto-negotiating, configured as auto-MDI/MDIX

RJ-45 console port

IEEE 802.3af in-line power on all 10/100 ports (PWR model)

PERFORMANCE

9-port
3.6 Gbps switching capacity (maximum), 2.7 Mpps forwarding rate (maximum)

18-port
5.2 Gbps switching capacity (maximum), 3.9 Mpps forwarding rate (maximum)

26-port
8.8 Gbps switching capacity (maximum), 6.6 Mpps forwarding rate (maximum)

All models
Wirespeed performance across ports in full mesh configuration

Store-and-forward switching; latency <10 µs

LAYER 2 SWITCHING

8,196 MAC addresses in address table

64 static MAC addresses (in addition to default address)

256 Port-based VLANs (IEEE 802.1Q)

IEEE 802.3ad Link Aggregation Control Protocol (LACP); automated and manual aggregation

Per-switch trunk groups:

- 2 groups (9- and 18--port)
- 3 groups (26-port)
- 8 10/100 ports or 2 Gigabit ports per group

Auto-negotiation of port speed and duplex

IEEE 802.3x full-duplex flow control

Back pressure flow control for half duplex

Broadcast storm suppression

IEEE 802.1D Spanning Tree Protocol (STP)

IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)

IEEE 802.1Q Multiple Spanning Tree Protocol (MSTP)

Bridge Protocol Data Unit (BPDU) protection

Internet Group Management Protocol (IGMP) snooping v1, 2 and 3

Filtering for 128 multicast groups

CONVERGENCE

Four hardware queues per port

Strict priority queuing

IEEE 802.1p Class of Service/Quality of Service (CoS/QoS) on egress

SECURITY

IEEE 802.1X Network login user authentication:

- EAP over LAN (EAPoL) transport with EAP-MD5, PAP, CHAP, PEAP and EAP-TLS authentication
- Multiple users per port

RADIUS server authentication

RADIUS Authenticated Device Access (RADA): authenticate devices based on MAC address against RADIUS server

Port-based MAC address Disconnect Unknown Device (DUD)

SNMP v3 encryption

SSH v2

Denial of Service protection

CLUSTERED STACKING

Single IP address and management interfaces for centralized control

Up to 32 devices per cluster across Switch 4210, 4200G, 4500, 4500G, 5500 and 5500G devices, or 768 10/100 front panel ports

MANAGEMENT

CLI via console or Telnet

Embedded web management interface

System configuration with SNMP v1, 2c and 3

Remote Monitoring (RMON) groups statistics, history, alarm and events

Clear text configuration files for easy administration with backup and restore

DHCP Relay and UDP Helper

System file transfer mechanisms: FTP, Trivial FTP (TFTP)

3Com management applications:

- 3Com Enterprise Management Suite for flexible, extensible management in advanced enterprise IT environments
- 3Com Network Director for comprehensive, turn-key network management for the enterprise
- 3Com Network Supervisor for basic, turn-key network management for mid-market businesses
- 3Com Network Access Manager for IEEE 802.1X and RADA integration with IAS/Active Directory

DIMENSIONS

9-port non-PWR
Height: 45 mm (1.7 in or 1 RU)
Width: 230 mm (9.1 in)
Depth: 160 mm (6.3 in)
Weight: 1.06 kg (2.3 lbs)

18-port non-PWR
Height: 45 mm (1.7 in or 1 RU)
Width: 360 mm (14.2 in)
Depth: 160 mm (6.3 in)
Weight: 1.53 kg (3.4 lbs)

26-port non-PWR
Height: 45 mm (1.7 in or 1 RU)
Width: 440 mm (17.3 in)
Depth: 160 mm (6.3 in)
Weight: 2.14 kg (4.7 lbs)

9-port PWR
Height: 45 mm (1.7 in or 1 RU)
Width: 300 mm (11.8 in)
Depth: 233 mm (9.2 in)
Weight: 2.22 kg (4.9 lbs)

18-port PWR
Height: 45 mm (1.7 in or 1 RU)
Width: 300 mm (11.8 in)
Depth: 275 mm (10.8 in)
Weight: 2.7 kg (6.0 lbs)

26-port PWR
Height: 45 mm (1.7 in or 1 RU)
Width: 440 mm (17.3 in)
Depth: 430 mm (16.9 in)
Weight: 6.09 kg (13.4 lbs)

SPECIFICATIONS
(CONTINUED)

MOUNTING
9- and 18-port models are free-standing

26-port models are free-standing or 19" rack mount

POWER SUPPLY
AC Line Frequency: 50/60 Hz

Input Voltage: 90-240 VAC

Current rating (AC)

9-, 18-, and 26-port non-PWR: 0.4A

9-port PWR: 2.0A

18-port PWR: 3.5A

26-port PWR: 8.0A

ENVIRONMENTAL REQUIREMENTS
Operating temperature: 0° to 40°C (32° to 104°F)

Storage temperature: -40° to 70°C (-40° to 158°F)

Humidity (operating and storage): up to 95% non-condensing

Standard: EN 60068 (IEC 68)

RELIABILITY
(MTBF @ 25°C)

9-port: 54 years (473,000 hours)

18-port: 50 years (438,000 hours)

26-port: 49 years (430,000 hours)

9-port PWR: 53 years (465,000 hours)

18-port PWR: 46 years (403,000 hours)

26-port PWR: 41 years (359,000 hours)

IEEE STANDARDS SUPPORTED
IEEE 802.1D Spanning Tree Protocol (STP)

IEEE 802.1p QoS

IEEE 802.1Q VLANs / VLAN tagging

IEEE 802.1s Multiple Spanning Tree

IEEE 802.1w Rapid Spanning Tree

IEEE 802.1X Network Login Security

IEEE 802.3 Ethernet

IEEE 802.3ad Link Aggregation (unit wide)

IEEE 802.3i 10BASE-T

IEEE 802.3u Fast Ethernet

IEEE 802.3x Flow control

IEEE 802.3z Gigabit Ethernet 1000BASE-X

IETF STANDARDS
RFC 783 TFTP Protocol

RFC 791 IP

RFC 793 TCP

RFC 826 Address Resolution Protocol (ARP)

RFC 854 Telnet

RFC 1157 SNMP v1, v2

RFC 1212 Concise MIB definitions

RFC 1305 Network Time Protocol (NTP) v3

RFC 1350 Remote software upgrade TFTP

RFC 1881 IPv6 address allocation management

RFC 1886 DNS extensions to support IPv6

RFC 1887 Architecture for IPv6 Unicast address allocation

RFC 1924 Compact representation of IPv6 addresses

RFC 2131 DHCP client

RFC 2236 Internet Group Management Protocol (IGMP) snooping

RFC 2284 Network login 802.1X

RFC 2373 IPv6 addressing architecture

RFC 2452 IPv6 MIB for the transmission control protocol

RFC 2454 IPv6 MIB for the user diagram protocol

RFC 2460 IPv6 specification

RFC 2461 Neighbor discovery for IPv6

RFC 2463 ICMPv6 for IPv6

RFC 2464 Transmission of IPv6 over Ethernet

RFC 2465 MIB of IPv6, textual conversations and general group

RFC 2466 MIB for IPv6 ICMPv6 group

RFC 2526 Reserved IPv6 anycast address

RFC 2581 TCP congestion control

RFC 2616 HTTP compatibility

RFC 2767 dual stacks IPv4 and IPv6

RFC 2819 RMON 4 groups

RFC 2865 Remote authentication dial-in user (RADIUS)

RFC 2866 RADIUS RFC 2138 / Accounting

RFC 3376 Internet Group Management Protocol (IGMP) Snooping

RFC 3484 Default address selection for IPv6

RFC 3493 Basic socket interface for IPv6

RFC 3513 IPv6 Addressing Architecture

RFC 3542 Advanced sockets API for IPv6

RFC 3587 IPv6 Global Unicast Address

RFC 4443 Internet Control Message Protocol (ICMPv6) for IPv6

Management, including MIBs Supported
RFC 1213 SNMP MIB II

RFC 1215 SNMP Traps

RFC 1493 Bridge MIB

RFC 1757 RMON I MIB

RFC 1907 SNMP v2c, SMI v2 and Revised MIB-II

RFC 2096 IP Forwarding Table MIB

RFC 2233 Interfaces MIB

RFC 2571 SNMP Framework MIB

RFC 2573 SNMP Notification MIB / Target MIB

RFC 2574 SNMPv3 MIB

RFC 2575 SNMP Access Control

RFC 2618 RADIUS Authentication Client MIB

RFC 2620 RADIUS Accounting Client MIB

RFC 2665 EtherLike MIB

RFC 2674 Bridge MIB Extensions Q-Bridge, P-Bridge, Extensions

RFC 2737 Entity MIB

RFC 2819 RMON I MIB

RFC 2863 Disc-sizing MIB

RFC 2925 Definitions of managed objects for remote ping, traceroute, and lookup operations

RFC 3414 SNMP User based SM MIB

RFC 3415 SNMP View based ACM MIB

RFC 3418 SNMP v2 MIB

EMISSIONS/AGENCY APPROVALS
EN 55022 Class A

FCC Part 15 Subpart B Class A

ICES-003 Class A

VCCI Class A

IMMUNITY
EN 55024

SAFETY AGENCY CERTIFICATIONS
UL 60950-1

EN 60950-1

CSA 2.22 # 60950

IEC 60950-1

EU RoHS Compliant

WARRANTY AND OTHER SERVICES
Limited Lifetime Hardware Warranty, including fans and power supply

Limited Software Warranty for 90 days

Advance Hardware Replacement with Next Business Day shipment in most regions

Limited Lifetime software updates

90 days of telephone technical support

Refer to **www.3com.com/warranty** for details.

ORDERING INFORMATION

PRODUCT DESCRIPTION	3COM SKU
3Com Switch 4210 9-Port	3CR17331-91
3Com Switch 4210 18-Port	3CR17332-91
3Com Switch 4210 26-Port	3CR17333-91
3Com Switch 4210 PWR 9-Port	3CR17341-91
3Com Switch 4210 PWR 18-Port	3CR17342-91
3Com Switch 4210 PWR 26-Port	3CR17343-91
Fast Ethernet SFP Transceivers	
3Com 100BASE-FX SFP	3CSFP81
3Com 100BASE-LX10 SFP	3CSFP82
3Com 100BASE-BX10-D SFP	3CSFP85
3Com 100BASE-BX10-U SFP	3CSFP86
Gigabit SFP Transceivers	
3Com 1000BASE-SX SFP	3CSFP91
3Com 1000BASE-LX SFP	3CSFP92
3Com 1000BASE-LH SFP	3CSFP97
3Com Global Services	
3Com Network Health Check, Installation Services, and Express Maintenance	www.3com.com/services_quote
3Com University Courses	www.3com.com/3comu

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